



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/795,963	03/07/2004	David Gere	017516-001520US	8624

51947 7590 03/23/2007
PATENT DEPT
INTUITIVE SURGICAL, INC
1266 KIFER RD
BUILDING 101
SUNNYVALE, CA 94086

EXAMINER

REKSTAD, ERICK J

ART UNIT PAPER NUMBER

2621

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/795,963

Applicant(s)

GERE ET AL.

Examiner

Erick Rekstad

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 40, 41, 46-50, 52-54, and 60-62 is/are rejected.
- 7) ☐ Claim(s) 42-45, 51 and 56-59 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This is a Final Rejection for application no. 10/795,963 in response to the amendment filed December 26, 2006 wherein claims 40-62 are presented.

Response to Arguments

Applicant's arguments with respect to cancelled claims 33-39 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 40, 41, 47, 48, 50, 52, 54, 55, 61 and 62 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 6,191,809 to Hori et al.
[claim 40]

As shown in Figure 2, Hori teaches a method of aligning left and right stereoscopic images (22R and 22L, Fig. 1) (Col 1 Lines 5-9), the method comprising:

Capturing right stereoscopic image pixel information for a target object in a first array(34R) and capturing left stereoscopic image pixel information for the target object in a second array (34L) (Col 7 Lines 19-27);

Calculating a first intersection position in the first array and calculating a second intersection position in the second array (Col 7 Lines 28-33, Fig. 8);

Selecting a portion of the first array and a portion of the second array such that the calculated intersection positions for each array substantially occupy the same position relative to the selected portions (Col 7 Lines 41-51, Fig. 8));

Outputting an aligned stereoscopic image to a viewer by displaying the selected portion of the first array and the selected portion of the second array (Col 9 Lines 35-41, Fig. 9A, 9B).

[claim 41]

Hori teaches the use of the method in an endoscope or operating microscope (Col 1 Lines 5-9).

[claims 47 and 48]

Hori further teaches the acts of capturing right stereoscopic image pixel information, capturing left stereoscopic image pixel information, calculating a first intersection position, calculating a second intersection position, selecting a portion of the first array and a portion of the second array, and outputting an aligned stereoscopic image are automatically repeated to compensate for stereoscopic image misalignment (Col 8 Lines 4-9).

In regards to claim 48, the claim is a similar to claims 40 and 47. Hori further teaches the adjusting for size ration in order to provided equal size images of the same target(Col 7 Lines 47-51).

[claims 50 and 52]

Hori teaches the use of a test pattern as shown in Figure 8. Hori further teaches the use of the light intensity along horizontal and vertical lines in order to associate the position of analysis output data points with image pixel position and line position (Col 7 Lines 23-27). Hori further specifically teaches the detection of points h11, h12, h13, h21, h22, h23, v11, v12, v13, v21, v22 and v23 (Col 7 Lines 29-32).

[claim 54]

As shown in Figure 1, Hori teaches an endoscopic imaging system comprising:

An image capture stage that captures right and left image pixel information for the target object (22R and 22L);

A video processing stage(26) that calculates a first intersection position in the first array and a second intersection position in the second array and selects a portion of the first array and a portion of the second array such that the calculated intersection positions for each array substantially occupy the same position relative to the selected portions (Col 7 Lines 28-33 and 41-51, Fig. 2)

A monitor stage (32) that outputs an aligned stereoscopic image to a viewer by displaying the selected portion of the first array and the selected portion of the second array (Col 9 Lines 35-41).

[claim 55]

Hori teaches the use of the system used with an endoscope or operating microscope (Col 1 Lines 5-9).

[claim 61]

Hori further teaches the acts of capturing right stereoscopic image pixel information, capturing left stereoscopic image pixel information, calculating a first intersection position, calculating a second intersection position, selecting a portion of the first array and a portion of the second array, and outputting an aligned stereoscopic image are automatically repeated to compensate for stereoscopic image misalignment (Col 8 Lines 4-9).

[claim 62]

As shown in Figure 1, Hori teaches the images are transmitted from an endoscope (2) (Col 4 Lines 13-14).

Claim Rejections - 35 USC § 103

Claims 46, 48, 53, and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hori as applied to claims 40 and 48 above, and further in view of US Patent 5,315,630 to Sturm et al.

[claims 46, 48, 53, and 60]

As shown above, Hori teaches the method for aligning left and right stereoscopic images. Hori further teaches the use of a pattern image in order to align the left and right images (Col 7 Lines 1-3). Hori is silent on the image being a surgical site.

As shown in Figure 1, Sturm teaches the use of a surgical imaging system. Sturm further teaches the aligning of the system using two imagers and a test pattern using markers, where the markers are on a surgical site (Col 5 Lines 8-22, Col 6 Lines 37-59, Fig. 4). It would have been obvious to one of ordinary skill in the art at the time

of the invention to use the markers of Sturm with the method of Hori in order to align the system with an intended surgical site as taught by Sturm (Col 6 Lines 37-59).

Allowable Subject Matter

Claims 42-45, 51, and 56-59 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

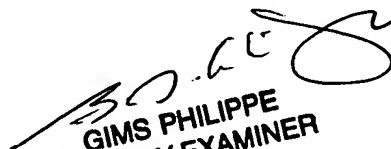
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Rekstad whose telephone number is 571-272-7338. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Erick Rekstad
Examiner
AU 2621
(571) 272-7338
erick.rekstad@uspto.gov


GIMS PHILIPPE
PRIMARY EXAMINER